

GSFC OPERATIONS CONTROL CENTER  
GODDARD SPACE FLIGHT CENTER  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 6, NO. 8

APRIL 30, 1966

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED  
BY THE GODDARD SPACE FLIGHT CENTER, NORAD, AND THE SMITHSONIAN  
ASTROPHYSICAL OBSERVATORY AS OF 1200Z ON APRIL 30, 1966.

# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1958 LAUNCHES									
ALPHA 1	EXPLORER 1	004	US	1 FEB	103.6	33.18	1518	339	
BETA 1	ROCKET BODY	016	US	17 MAR	138.4	34.26	4316	651	
BETA 2	VANGUARD 1	005	US	17 MAR	134.0	34.24	3936	652	
BETA 3		1576	US	17 MAR	132.7	34.23	3829	640	
1959 LAUNCHES									
ALPHA 1	VANGUARD 2	011	US	17 FEB	125.4	32.87	3287	553	
ALPHA 2	ROCKET BODY	012	US	17 FEB	129.7	32.90	3655	557	
ETA 1	VANGUARD 3	020	US	18 SEP	129.8	33.34	3713	513	
MU 1	LUNIK 1	112	USSR	2 JAN	HELIOCENTRIC ORBIT				
NU 1	PIONEER 4	113	US	3 MAR	HELIOCENTRIC ORBIT				
IOTA 1	EXPLORER 7	022	US	13 OCT	101.1	50.31	1071	553	
IOTA 2	ROCKET BODY	023	US	13 OCT	100.9	50.31	1051	550	
1960 LAUNCHES									
ALPHA 1	PIONEER 5	027	US	11 MAR	HELIOCENTRIC ORBIT				
BETA 1	ROCKET BODY	028	US	1 APR	99.1	48.38	739	692	
BETA 2	TIROS 1	029	US	1 APR	99.2	48.38	744	695	
BETA 3	NONE	101	US	1 APR	97.9	48.49	696	615	
BETA 4	NONE	115	US	1 APR	99.9	48.16	803	701	
GAMMA 2	TRANSIT 1B	031	US	13 APR	93.4	51.21	538	340	
GAMMA 4	NONE	099	US	13 APR	96.7	51.25	720	479	
ZETA 1	MIDAS 2	043	US	24 MAY	94.3	33.04	490	471	
ETA 1	TRANSIT 2A	045	US	22 JUN	101.6	66.70	1059	612	
ETA 2	GREB	046	US	22 JUN	101.6	66.70	1056	613	
ETA 3	ROCKET BODY	047	US	22 JUN	101.4	66.77	1048	602	
ETA 4		840	US	22 JUN	101.5	66.69	1051	612	
ETA 5		841	US	22 JUN	101.5	66.70	1047	612	

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							Km.	Km.	Km.	Km.	

## 1960 LAUNCHES (CONT'D)

IOTA 1	ECHO I	049	US	12 AUG	112.8	47.31	1795	913		
IOTA 2	ROCKET BODY	050	US	12 AUG	118.1	47.22	1684	1503		
IOTA 3	METAL OBJECT	051	US	12 AUG	118.2	47.26	1692	1511		
IOTA 4	METAL OBJECT	052	US	12 AUG	CURRENT ELEMENTS NOT MAINTAINED					
IOTA 5	METAL OBJECT	053	US	12 AUG	118.4	47.34	1729	1491		
NU 1	COURIER 1B	058	US	4 OCT	107.0	28.31	1208	966		
NU 2	ROCKET BODY	059	US	4 OCT	106.6	28.24	1206	925		
XI 1	EXPLORER 8	060	US	3 NOV	112.2	49.95	2239	417		
XI 2	ROCKET BODY	062	US	3 NOV	111.7	49.96	2188	418		
XI 3	NONE	069	US	3 NOV	108.4	49.38	1901	397		
XI 4	NONE	105	US	3 NOV	110.0	50.48	2032	417		
PI 1	TIROS 2	063	US	23 NOV	98.2	48.51	728	619		
PI 2	ROCKET BODY	064	US	23 NOV	98.1	48.52	717	616		
PI 3	NONE	074	US	23 NOV	98.1	48.52	718	620		
PI 4	NONE	075	US	23 NOV	98.3	48.52	732	620		

## 1961 LAUNCHES

ALPHA 1	SAMOS 2	070	US	31 JAN	94.7	97.37	540	466		
ALPHA 2	METAL OBJECT	079	US	31 JAN	94.6	97.38	533	463		
GAMMA 1	VENUS PROBE	080	USSR	12 FEB	HELIOCENTRIC ORBIT					
DELTA 2	ROCKET BODY	082	US	16 FEB	118.5	38.85	2590	636		
DELTA 3	NONE	085	US	16 FEB	CURRENT ELEMENTS NOT MAINTAINED					
KAPPA 1	EXPLORER 10	098	US	25 MAR	POSITION UNCERTAIN					
NU 1	EXPLORER 11	107	US	27 APR	107.9	28.78	1773	484		
OMICRON 1	TRANSIT 4A	116	US	29 JUN	103.8	66.81	999	881		
OMICRON 2	INJUN-SR-3	117	US	29 JUN	103.8	66.84	1009	871		
OMICRON 3-212**	METAL OBJECTS		US	29 JUN						
RHO 1	TIROS 3	162	US	12 JUL	100.4	47.90	818	737		
RHO 2	ROCKET BODY	165	US	12 JUL	100.3	47.90	804	743		

\$54\$324\$150\$400

# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1961 LAUNCHES (CONT'D)									
RHO 3	METAL OBJECT	166	US	12 JUL	98.8	47.93	792	612	
RHO 4	METAL OBJECT	167	US	12 JUL	102.0	47.85	933	773	
SIGMA 1	MIDAS 3	163	US	12 JUL	161.5	91.25	3547	3344	
SIGMA 3	METAL OBJECT	188	US	12 JUL	161.1	91.21	3542	3321	
SIGMA 4	METAL OBJECT	196	US	12 JUL	161.9	91.21	3571	3353	
UPSILON 1	EXPLORER 12	170	US	16 AUG	CURRENT	ELEMENTS NOT MAINTAINED			
A DELTA 1	MIDAS 4	192	US	21 OCT	166.0	95.85	3751	3502	
A DELTA 3	METAL OBJECT	194	US	21 OCT	165.6	95.84	3741	3480	
A DELTA 4	METAL OBJECT	195	US	21 OCT	166.4	95.86	3804	3483	
A DELTA 5		2009	US	21 OCT	165.7	95.84	3732	3501	
A ETA 1	TRANSIT 4B	202	US	15 NOV	105.8	32.43	1103	955	
A ETA 2	TRAAC	205	US	15 NOV	105.8	32.42	1104	956	
A ETA 3	ROCKET BODY	204	US	15 NOV	105.6	32.43	1098	948	
1962 LAUNCHES									
ALPHA 1	RANGER 3	221	US	26 JAN	HELIOCENTRIC ORBIT				
ALPHA 2	ROCKET BODY	222	US	26 JAN	HELIOCENTRIC ORBIT				
BETA 1	TIROS 4	226	US	8 FEB	100.4	48.31	839	712	
BETA 2	ROCKET BODY	227	US	8 FEB	101.4	48.13	943	701	
BETA 3	METAL OBJECT	228	US	8 FEB	99.5	48.42	761	704	
BETA 4	METAL OBJECT	229	US	8 FEB	100.3	48.29	837	706	
ZETA 1	ORB.SOL.OBS. 1	255	US	7 MAR	96.0	32.83	586	546	
ZETA 2	ROCKET BODY	257	US	7 MAR	96.0	32.83	580	545	
KAPPA 1		271	US	9 APR	153.0	86.58	3407	2789	
KAPPA 3		273	US	9 APR	152.6	86.64	3371	2795	
KAPPA 4		274	US	9 APR	153.3	86.63	3426	2800	
MU 2	ROCKET BODY	282	US	23 APR	HELIOCENTRIC ORBIT				
OMICRON 1	ARIEL	285	US/UK	26 APR	100.3	53.85	1156	389	136.405
OMICRON 2	ROCKET BODY	288	US	26 APR	100.1	53.85	1138	389	

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OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1962 LAUNCHES (CONT'D)									
A ALPHA 1	TIROS 5	309	US	19 JUN	100.5	58.12	973	589	
A ALPHA 2	ROCKET BODY	311	US	19 JUN	100.4	58.12	963	589	
A ALPHA 3	METAL OBJECT	312	US	19 JUN	101.7	58.20	1084	593	
A ALPHA 4	METAL OBJECT	313	US	19 JUN	99.1	58.00	855	574	
A EPSILON 1	TELSTAR 1	340	US	10 JUL	157.8	44.79	5643	945	
A EPSILON 2	ROCKET BODY	341	US	10 JUL	157.6	44.79	5634	940	
A OMICRON 1		369	US	23 AUG	99.5	98.69	856	618	
A OMICRON 2		370	US	23 AUG	98.2	98.60	748	600	
A OMICRON 3		378	US	23 AUG	100.8	98.78	970	623	
A OMICRON 4		388	US	23 AUG	99.5	98.69	854	617	
A RHO 1	MARINER 2	374	US	27 AUG	HELIOCENTRIC ORBIT				
A RHO 2	ROCKET BODY	375	US	27 AUG	HELIOCENTRIC ORBIT				
A PSI 1	TIROS 6	397	US	18 SEP	98.7	58.30	710	687	
A PSI 2	ROCKET BODY	398	US	18 SEP	98.6	58.30	706	682	
A PSI 3	METAL OBJECT	399	US	18 SEP	99.4	58.45	774	683	
A PSI 4	METAL OBJECT	400	US	18 SEP	98.0	58.21	693	635	
B ALPHA 1	ALOUETTE	424	CANADA	29 SEP	105.5	80.48	1036	909	
B ALPHA 2	ROCKET BODY	426	US	29 SEP	105.4	80.47	1028	1003	
B ALPHA 3	METAL OBJECT	510	US	29 SEP	105.4	80.51	1024	1001	
B ALPHA 4	METAL OBJECT	511	US	29 SEP	105.5	80.43	1037	999	
B GAMMA 1	EXPLORER 14	432	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B GAMMA 2#	ROCKET BODY	NNA	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B ETA 1	RANGER 5	439	US	18 OCT	HELIOCENTRIC ORBIT				
B ETA 2	ROCKET BODY	440	US	18 OCT	HELIOCENTRIC ORBIT				
B KAPPA 1		444	US	26 OCT	119.8	71.38	3119	179	
B LAMBDA 1	EXPLORER 15	445	US	27 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B LAMBDA 2#	ROCKET BODY	NNA	US	27 OCT	INSUFFICIENT OBSERVATIONS				
B MU 1	ANNA 1B	446	US	31 OCT	107.9	50.13	1183	1076	\$162\$324
B MU 2	ROCKET BODY	447	US	31 OCT	107.6	50.21	1161	1072	
B NU 3		450	USSR	1 NOV	HELIOCENTRIC ORBIT				

\$136.591\$136.078

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OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1962 LAUNCHES (CONT'D)									
B TAU 1		502	US	13 DEC	101.3	70.30	1408	225	\$136.140; 136.621
B TAU 2		504	US	13 DEC	108.7	70.31	2092	236	
B TAU 5	INJUN 3	513	US	13 DEC	101.1	70.26	1387	227	
B TAU 6		520	US	13 DEC	107.3	70.28	1963	236	
B UPSILON 1	RELAY 1	503	US	13 DEC	185.1	47.48	7433	1325	
B UPSILON 2	ROCKET BODY	515	US	13 DEC	184.8	47.50	7416	1325	
B CHI 1	EXPLORER 16	506	US	16 DEC	104.4	52.04	1173	756	
B PSI 1	TRANSIT 5A	509	US	19 DEC	99.1	90.66	737	693	
B PSI 2		514	US	19 DEC	97.6	90.75	720	567	
B PSI 3		519	US	19 DEC	99.0	90.65	746	682	
B PSI 4		523	US	19 DEC	100.2	90.49	839	696	
1963 LAUNCHES									
1963 03A		527	US	16 JAN	94.3	81.90	514	460	
1963 04A	SYNCOM 1	553	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 04B	ROCKET BODY	532	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 05A		533	US	19 FEB	97.6	100.47	798	496	
1963 05B		534	US	19 FEB	97.7	100.45	794	502	
1963 05C		535	US	19 FEB	96.7	100.49	737	468	
1963 05D		536	US	19 FEB	98.3	100.49	831	524	
1963 08B		566	USSR	2 APR	BARYCENTRIC ORBIT				
1963 09A	EXPLORER 17	564	US	3 APR	92.4	57.58	543	235	
1963 13A	TELSTAR 2	573	US	7 MAY	225.3	42.76	10797	976	
1963 13B	ROCKET BODY	575	US	7 MAY	225.1	42.76	10783	973	
1963 14A		574	US	9 MAY	166.4	87.54	3672	3619	
1963 14B		579	US	9 MAY	166.4	87.24	4251	3039	
1963 14C		608	US	9 MAY	166.4	87.33	3700	3590	
1963 14D		589	US	9 MAY	CURRENT ELEMENTS NOT MAINTAINED				
1963 14E		602	US	9 MAY	166.1	87.34	3654	3609	

OBJECTS IN ORBIT

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1963 LAUNCHES (CONT'D)									
1963 14F		628	US	9 MAY	166.8	87.32	3662	3660	
1963 14G		629	US	9 MAY	166.4	87.34	3712	3578	
1963 14H		702	US	9 MAY	166.4	87.32	3683	3607	
1963 22A		594	US	16 JUN	99.7	90.01	760	729	\$150\$400
1963 22B		603	US	16 JUN	99.7	90.01	758	731	
1963 22C		610	US	16 JUN	101.2	90.21	891	742	
1963 22D		611	US	16 JUN	98.0	89.80	767	566	
1963 24A		604	US	19 JUN	97.4	58.22	644	626	
1963 24B	TIROS 7	605	US	19 JUN	97.3	58.22	635	625	\$136.233\$136.924
1963 24C	ROCKET BODY	606	US	19 JUN	97.9	58.36	675	638	
1963 24D	METAL OBJECT	607	US	19 JUN	96.9	58.11	637	580	
1963 25B	METAL OBJECT	614	US	27 JUN	131.9	82.17	4079	337	
1963 26A	RESEARCH	612	US	28 JUN	102.0	49.72	1290	413	
	SATELLITE FOR								
	GEOPHYSICS								
1963 27A		613	US	29 JUN	94.6	82.33	520	479	
1963 30A		622	US	18 JUL	167.8	88.44	3737	3668	
1963 30B		635	US	18 JUL	167.9	88.43	3737	3667	
1963 30C		630	US	18 JUL	167.5	88.44	3724	3652	
1963 30D		624	US	18 JUL	167.3	87.91	4736	2623	
1963 30E		631	US	18 JUL	168.3	88.45	3788	3651	\$136.467\$136.980
1963 31A	SYNCOM 2	634	US	26 JUL	1434.9	31.23	35803	35722	\$1814.069
									\$1815.794
									\$1820.177
1963 31B	ROCKET BODY	625	US	26 JUL	CURRENT ELEMENTS NOT MAINTAINED				
1963 38A		669	US	28 SEP	107.1	89.90	1110	1077	
1963 38B		670	US	28 SEP	107.4	89.90	1137	1074	
1963 38C		671	US	28 SEP	107.3	89.90	1135	1075	\$136.653\$162\$324
1963 38D		672	US	28 SEP	107.3	89.95	1130	1078	

OBJECTS IN ORBIT

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<b>1963 LAUNCHES (CONT'D)</b>									
1963 38E		745	US	28 SEP	107.1	89.95	1111	1074	
1963 38F		2097	US	28 SEP	107.3	89.95	1138	1070	
1963 39A		674	US	17 OCT	6490.7	37.80	117349	100421	
1963 39B		675	US	17 OCT	CURRENT ELEMENTS NOT MAINTAINED				
1963 39C		692	US	17 OCT	6509.4	36.57	115176	103035	
1963 43A		683	USSR	1 NOV	102.2	58.90	1384	340	
1963 43B	POLYOT 1	684	USSR	1 NOV	97.2	58.59	893	313	
1963 43D		686	USSR	1 NOV	96.8	59.84	883	326	
1963 46A		693	US	27 NOV	CURRENT ELEMENTS NOT MAINTAINED				
1963 47A	EXPLORER 18	694	US	27 NOV	107.8	30.36	1768	478	
1963 47B	CENTAUR 2	696	US	27 NOV	107.2	30.05	1614	578	
1963 47C		697	US	27 NOV	107.4	30.07	1634	577	
1963 47D		698	US	27 NOV	108.0	29.91	1653	614	
1963 47E		699	US	27 NOV	108.6	30.45	1739	580	
1963 47F		700	US	27 NOV	108.6	30.47	1748	577	
1963 47G		701	US	27 NOV	107.8	30.00	1644	605	
1963 47H		739	US	27 NOV	105.9	30.41	1592	477	
1963 47J		1994	US	27 NOV	108.8	30.52	1775	562	
1963 49A		703	US	5 DEC	106.8	89.95	1089	1071	
1963 49B		704	US	5 DEC	107.1	89.95	1124	1066	
1963 49C		705	US	5 DEC	107.1	89.94	1124	1064	
1963 49D		706	US	5 DEC	107.0	89.93	1117	1066	
1963 49E		715	US	5 DEC	107.1	89.95	1122	1064	
1963 49F		753	US	5 DEC	107.1	89.97	1121	1068	
1963 53A	EXPLORER 19	714	US	19 DEC	115.0	78.68	2248	665	
1963 53B		721	US	19 DEC	115.8	78.60	2394	596	
1963 53C		722	US	19 DEC	115.8	78.61	2372	614	
1963 53D		723	US	19 DEC	115.8	78.69	2375	614	
1963 53E		724	US	19 DEC	115.9	78.63	2368	626	
1963 53F		725	US	19 DEC	115.7	78.63	2375	604	
1963 53G		726	US	19 DEC	115.7	78.38	2387	594	

\$150\$400



OBJECTS IN ORBIT

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1963 LAUNCHES (CONT'D)									
1963 53H		732	US	19 DEC	115.7	78.62	2390	589	
1963 54A	TIROS 8	716	US	21 DEC	99.4	58.52	753	703	\$136.231\$136.924
1963 54B		717	US	21 DEC	99.3	58.55	743	706	
1963 54C		720	US	21 DEC	101.1	58.49	914	704	
1963 54D		736	US	21 DEC	97.7	58.54	706	588	
1964 LAUNCHES									
1964 01A		727	US	11 JAN	103.4	69.90	944	901	
1964 01B	GGSE	728	US	11 JAN	103.4	69.91	932	913	
1964 01C	EGRS 1	729	US	11 JAN	103.4	69.92	933	921	136.805
1964 01D	SOLAR RAD.	730	US	11 JAN	103.5	69.92	933	912	136.886
1964 01E		731	US	11 JAN	103.5	69.91	932	914	
1964 02A		733	US	19 JAN	101.3	99.15	851	790	
1964 02B		734	US	19 JAN	101.3	99.10	835	804	
1964 02C		735	US	19 JAN	101.3	99.11	832	811	
1964 03A	RELAY 2	737	US	21 JAN	194.7	46.33	7425	2075	136.620\$136.142
1964 03B		738	US	21 JAN	194.8	46.33	7434	2071	
1964 04A	ECHO 2	740	US	25 JAN	107.9	81.51	1170	1192	136.019;136.170
1964 04B		741	US	25 JAN	108.9	81.50	1308	1048	
1964 04C		742	US	25 JAN	108.8	81.49	1308	1041	
1964 04D		743	US	25 JAN	108.8	81.54	1308	1040	
1964 06A	ELEKTRON 1	746	USSR	30 JAN	169.2	60.89	7109	405	
1964 06B	ELEKTRON 2	748	USSR	30 JAN	1356.4	58.38	66409	2016	
1964 06C		750	USSR	30 JAN	167.8	60.88	7011	382	
1964 06D		751	USSR	30 JAN	1384.1	58.50	67434	2089	
1964 11A		759	US	28 FEB	94.5	82.09	503	487	
1964 15A	ARIEL 2	771	US/UK	27 MAR	98.9	51.64	1122	285	136.557
1964 15B		775	US	27 MAR	97.8	51.65	1016	284	

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1964 LAUNCHES (CONT'D)									
1964 15C		847	US	27 MAR	102.7	51.38	1396	367	
1964 16D		785	USSR	2 APR	HELIOCENTRIC ORBIT				
1964 19B	POLYOT 2	784	USSR	12 APR	90.0	58.03	287	257	\$150\$400
1964 26A		801	US	4 JUN	103.1	90.52	951	860	
1964 26B		805	US	4 JUN	103.8	90.21	987	896	
1964 26C		806	US	4 JUN	102.3	90.88	945	791	
1964 26D		809	US	4 JUN	103.1	90.52	954	856	
1964 31A		812	US	18 JUN	101.6	99.74	839	830	
1964 31B		813	US	18 JUN	101.6	99.76	840	831	
1964 31C		815	US	18 JUN	101.6	99.81	844	824	
1964 35A		824	US	2 JUL	94.8	82.09	526	490	
1964 38A	ELECKTRON 3	829	USSR	10 JUL	168.1	60.93	7013	408	
1964 38B	ELECKTRON 4	830	USSR	10 JUL	1313.8	59.92	65409	1310	
1964 38C		831	USSR	10 JUL	168.3	61.01	7030	405	
1964 38D		832	USSR	10 JUL	1341.2	59.00	66485	1336	
1964 40A		836	US	17 JUL	6026.0	38.68	103902	102729	
1964 40B		837	US	17 JUL	6003.7	40.56	115626	90461	
1964 40C		838	US	17 JUL	CURRENT ELEMENTS NOT MAINTAINED				
1964 41B		843	US	28 JUL	BARYCENTRIC ORBIT				
1964 45B		851	US	14 AUG	125.9	95.67	3613	273	\$136.470\$136.980
1964 47A	SYNCOM 3	858	US	19 AUG	1435.3	.72	35783	35759	\$1820.177
									\$1815.794
									\$1814.931
1964 47B		862	US	19 AUG	CURRENT ELEMENTS NOT MAINTAINED				
1964 49D	COSMOS 41	869	USSR	22 AUG	713.4	67.32	38947	1025	
1964 49E		898	USSR	22 AUG	717.7	67.45	39382	972	
1964 51A	EXPLORER 20	870	US	25 AUG	103.9	79.91	1023	867	\$136.326\$136.350
1964 51B		871	US	25 AUG	103.8	79.91	1014	870	\$136.680
1964 51C		873	US	25 AUG	103.1	79.82	964	850	

# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCL- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/SS)
1964 LAUNCHES (CONT'D)									
1964 51D		874	US	25 AUG	103.2	79.82	991	830	
1964 51E		875	US	25 AUG	103.2	79.85	1015	810	
1964 52A	NIMBUS 1	872	US	28 AUG	98.2	98.72	924	426	
1964 52B		878	US	28 AUG	98.2	98.73	926	427	
1964 53A	COSMOS 44	876	USSR	28 AUG	99.5	65.10	863	609	
1964 53B		877	USSR	28 AUG	99.6	65.09	805	674	
1964 54A	OGO 1	879	US	5 SEP	3841.9	40.72	144824	4930	\$136.200\$400.250 \$400.850
1964 60A	EXPLORER 21	889	US	4 OCT	CURRENT ELEMENTS NOT MAINTAINED				
1964 63A		893	US	6 OCT	106.3	89.91	1080	1035	
1964 63B		897	US	6 OCT	106.6	89.90	1079	1061	
1964 63C		900	US	6 OCT	106.6	89.91	1082	1055	
1964 63D		901	US	6 OCT	106.6	89.90	1076	1067	
1964 63E		902	US	6 OCT	106.6	89.90	1079	1062	
1964 63F		903	US	6 OCT	106.6	89.92	1088	1055	
1964 64A	EXPLORER 22	899	US	10 OCT	104.8	79.70	1079	890	\$136.171\$162\$324 \$20\$40\$41\$360
1964 64B		907	US	10 OCT	104.7	79.69	1076	892	
1964 64C		976	US	10 OCT	104.0	79.33	1068	844	
1964 64D		977	US	10 OCT	105.5	80.03	1136	901	
1964 72A		922	US	4 NOV	94.9	82.06	520	509	
1964 72B		925	US	4 NOV	94.6	82.05	509	497	
1964 72C		926	US	4 NOV	93.1	82.05	424	424	
1964 72D		927	US	4 NOV	93.1	82.02	427	425	
1964 73A	MARINER 3	923	US	5 NOV	HELIOCENTRIC ORBIT				
1964 74A	EXPLORER 23	924	US	6 NOV	99.2	51.96	973	465	\$136.078\$136.861 136.709
1964 76A	EXPLORER 24	931	US	21 NOV	115.4	81.41	2364	581	\$136.292\$136.860
1964 76B	EXPLORER 25	932	US	21 NOV	116.2	81.39	2494	530	
1964 76C		933	US	21 NOV	116.2	81.36	2484	537	
1964 76D		934	US	21 NOV	116.3	81.40	2491	542	

# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1964 LAUNCHES (CONT'D)									
1964 76E		935	US	21 NOV	116.1	81.39	2492	525	
1964 76F		936	US	21 NOV	115.1	81.32	2352	567	
1964 76G		937	US	21 NOV	116.0	81.37	2468	539	
1964 76H		939	US	21 NOV	114.8	81.33	2321	571	
1964 76I		940	US	21 NOV	116.0	81.36	2475	530	
1964 76J		941	US	21 NOV	116.2	81.35	2474	546	
1964 76K		960	US	21 NOV	116.4	81.47	2443	605	
1964 76L		1411	US	21 NOV	116.3	81.38	2484	547	
1964 77A	MARINER 4	938	US	28 NOV	HELIOCENTRIC ORBIT				
1964 77B		942	US	28 NOV	HELIOCENTRIC ORBIT				
1964 78C	ZOND 2	945	USSR	30 NOV	HELIOCENTRIC ORBIT				
1964 83A		953	US	13 DEC	106.0	89.97	1072	1015	
1964 83B		956	US	13 DEC	106.3	90.00	1086	1027	
1964 83C		959	US	13 DEC	106.3	89.99	1091	1023	
1964 83D		965	US	13 DEC	106.3	89.99	1090	1025	135.650\$162\$324
1964 83E		966	US	13 DEC	106.3	89.97	1086	1028	\$150\$400
1964 83F		967	US	13 DEC	106.3	89.98	1089	1023	
1964 83G		1099	US	13 DEC	106.3	89.99	1089	1025	
1964 83H		1528	US	13 DEC	106.3	89.97	1082	1027	
1964 83J		1608	US	13 DEC	106.3	89.99	1090	1023	
1964 86A	EXPLORER 26	963	US	21 DEC	449.7	19.90	25874	253	136.273
1965 LAUNCHES									
1965 03A		973	US	19 JAN	97.6	98.71	828	461	
1965 04A	TIROS 9	978	US	22 JAN	119.2	96.37	2580	708	\$136.234\$136.198
1965 04B		979	US	22 JAN	119.3	96.39	2588	711	
1965 04C		1312	US	22 JAN	118.0	96.37	2511	676	
1965 04D		1313	US	22 JAN	120.4	96.42	2669	729	
1965 06A	COSMOS 53	983	USSR	30 JAN	93.4	48.70	654	209	

# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1965 LAUNCHES (CONT'D)									
1965 07A	ORB. SOL. OBS. 2	987	US	3 FEB	96.5	32.85	630	547	136.713
1965 07B		988	US	3 FEB	96.5	32.86	634	547	
1965 08A		1000	US	11 FEB	145.6	32.13	2801	2777	
1965 08B		1001	US	11 FEB	145.4	32.14	2796	2760	
1965 08C		1002	US	11 FEB	145.7	32.13	2806	2779	
1965 09A	PEGASUS 1	1085	US	16 FEB	97.0	31.75	728	496	\$136.410; 136.890
1965 09B		1088	US	16 FEB	97.1	31.74	734	497	
1965 10B		1087	US	17 FEB	BARYCENTRIC ORBIT				
1965 11A	COSMOS 54	1089	USSR	21 FEB	103.2	56.03	1557	258	
1965 11B	COSMOS 55	1090	USSR	21 FEB	103.1	56.01	1544	260	
1965 11C	COSMOS 56	1091	USSR	21 FEB	101.9	56.02	1440	253	
1965 11D		1092	USSR	21 FEB	105.3	56.03	1743	270	
1965 14A	COSMOS 58	1097	USSR	26 FEB	96.8	55.92	623	586	
1965 14B		1098	USSR	26 FEB	96.9	55.92	701	517	
1965 16A	GREB	1271	US	9 MAR	103.5	70.06	940	910	
1965 16B	GRAVITY GRADIENT II	1244	US	9 MAR	103.5	70.07	941	909	
1965 16C	GRAVITY GRADIENT III	1292	US	9 MAR	103.5	70.07	942	907	
1965 16D	SOLAR RAD.	1291	US	9 MAR	103.5	70.07	941	909	136.766
1965 16E	EGRS III	1208	US	9 MAR	103.5	70.08	938	910	136.800
1965 16F	OSCAR III	1293	US	9 MAR	103.5	70.09	939	910	136.840
1965 16G	SURCAL	1310	US	9 MAR	103.4	70.09	936	908	
1965 16H	DODECAHEDRON	1272	US	9 MAR	103.5	70.09	942	907	
1965 16J	ROCKET BODY	1245	US	9 MAR	103.5	70.12	936	911	
1965 17B	EGRS II	1250	US	11 MAR	97.0	89.98	947	282	
1965 17C		1228	US	11 MAR	96.6	89.98	912	279	
1965 17D		1248	US	11 MAR	96.5	90.00	905	284	
1965 20A	COSMOS 61	1267	USSR	15 MAR	102.9	56.00	1529	259	
1965 20B	COSMOS 62	1268	USSR	15 MAR	103.2	56.00	1564	258	
1965 20C	COSMOS 63	1269	USSR	15 MAR	102.1	56.01	1448	257	

# OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 20D-20EE***			USSR	15 MAR					
1965 21A		1273	US	18 MAR	97.5	98.99	756	528	
1965 21C		1289	US	18 MAR	97.5	98.99	758	526	
1965 21E		1376	US	18 MAR	96.4	98.98	654	521	
1965 21F		1463	US	18 MAR	98.6	99.02	860	527	
1965 23B		1298	US	21 MAR	BARYCENTRIC ORBIT				
1965 27A		1314	US	3 APR	111.5	90.21	1321	1274	
1965 27B		1315	US	3 APR	111.4	90.20	1324	1266	
1965 27C		1316	US	3 APR	111.5	90.19	1315	1277	
1965 27D		1389	US	3 APR	111.5	90.18	1316	1278	
1965 27E		1399	US	3 APR	111.5	90.22	1323	1272	
1965 28A		1317	US	6 APR	1437.3	.13	36596	35025	
1965 28B	EARLY BIRD	1318	US	6 APR	CURRENT ELEMENTS NOT MAINTAINED				
1965 30A	ROCKET BODY	1324	USSR	23 APR	720.0	65.56	39585	862	
1965 30D	MOLNIA 1	1967	USSR	23 APR	702.6	65.65	38785	822	
1965 31B		1329	US	28 APR	95.1	95.19	547	497	
1965 32A	EXPLORER 27	1328	US	29 APR	107.8	41.16	1311	940	\$136.740\$162\$32
1965 32B		1358	US	29 APR	107.8	41.17	1315	936	\$20\$40\$41\$360
1965 32C		1995	US	29 APR	106.7	41.09	1309	836	
1965 32D		2011	US	29 APR	109.0	41.18	1300	1062	
1965 34A		1359	US	6 MAY	157.0	32.12	3740	2782	
1965 34B		1360	US	6 MAY	309.9	32.21	14798	2784	
1965 34C		1361	US	6 MAY	145.6	32.13	2797	2777	
1965 38A		1377	US	20 MAY	100.0	98.59	964	555	
1965 38B		1378	US	20 MAY	100.0	98.59	965	555	
1965 38C		1379	US	20 MAY	99.9	98.62	957	556	
1965 38D		1380	US	20 MAY	94.1	98.95	484	435	
1965 38E		1461	US	20 MAY	101.0	98.63	1061	549	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 38F		1462	US	20 MAY	98.9	98.57	864	553	
1965 38G		1475	US	20 MAY	100.1	98.56	980	552	\$136.410;136.889
1965 39A	PEGASUS 2	1381	US	25 MAY	97.1	31.76	734	507	
1965 39B	ROCKET BODY	1385	US	25 MAY	97.2	31.75	737	509	
1965 42A	EXPLORER 28	1388	US	29 MAY	8558.8	33.86	264247	196	136.125
1965 44A	LUNIK 6	1393	USSR	8 JUN	HELIOCENTRIC ORBIT				
1965 48A		1420	US	24 JUN	106.9	90.00	1142	1028	
1965 48B		1425	US	24 JUN	106.9	89.97	1137	1031	
1965 48C		1428	US	24 JUN	106.6	89.97	1115	1025	
1965 48D		1435	US	24 JUN	106.9	90.00	1139	1033	
1965 50A		1422	US	25 JUN	94.6	107.66	502	495	
1965 51A	TIROS 10	1430	US	2 JUL	100.7	98.61	838	743	\$136.232\$136.924
1965 51B		1433	US	2 JUL	100.7	98.65	845	742	
1965 51C		1440	US	2 JUL	99.3	98.51	842	614	
1965 51D		1529	US	2 JUL	102.0	98.69	885	827	
1965 52A	COSMOS 70	1431	USSR	2 JUL	95.5	48.75	867	219	
1965 52B		1432	USSR	2 JUL	92.5	48.74	567	215	
1965 53A	COSMOS 71	1441	USSR	16 JUL	95.2	56.06	543	517	
1965 53B	COSMOS 72	1442	USSR	16 JUL	95.9	56.07	579	545	
1965 53C	COSMOS 73	1443	USSR	16 JUL	95.6	56.08	550	542	
1965 53D	COSMOS 74	1444	USSR	16 JUL	96.2	56.05	608	546	
1965 53E	COSMOS 75	1445	USSR	16 JUL	96.5	56.05	638	544	
1965 53F		1448	USSR	16 JUL	96.6	56.09	641	548	
1965 53G		1449	USSR	16 JUL	94.9	56.06	526	502	
1965 53H		1473	USSR	16 JUL	96.6	56.04	652	543	
1965 55A		1447	US	17 JUL	94.4	70.17	509	468	
1965 55B		1452	US	17 JUL	92.6	70.14	412	390	
1965 55C		1455	US	17 JUL	93.4	70.13	448	427	

# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCL- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1965 LAUNCHES (CONT'D)									
1965 56A	ZOND 3	1454	USSR	18 JUL	HELIOCENTRIC ORBIT				
1965 58A		1458	US	20 JUL	6695.0	34.81	116970	105610	
1965 58B		1459	US	20 JUL	6700.3	34.45	122195	100511	
1965 58C		1460	US	20 JUL	2595.4	36.88	111793	566	136.768
1965 60A	PEGASUS 3	1467	US	30 JUL	95.1	28.88	532	512	\$136.410; 136.590
1965 60B		1468	US	30 JUL	95.2	28.87	534	518	
1965 62B		1472	US	3 AUG	94.7	107.36	506	499	
1965 63A	EGRS 5	1506	US	10 AUG	122.2	69.23	2427	1135	136.840
1965 63B		1502	US	10 AUG	122.2	69.25	2426	1137	
1965 64A	CENTAUR 6	1503	US	11 AUG	HELIOCENTRIC ORBIT				
1965 65A		1504	US	13 AUG	108.1	90.03	1193	1088	
1965 65B		1508	US	13 AUG	107.9	90.01	1159	1102	
1965 65C		1510	US	13 AUG	108.1	90.03	1191	1086	
1965 65D		1511	US	13 AUG	108.1	90.01	1185	1096	
1965 65E		1512	US	13 AUG	108.1	90.02	1195	1087	
1965 65F		1514	US	13 AUG	108.1	90.03	1194	1090	
1965 65G		1515	US	13 AUG	108.1	90.00	1187	1089	
1965 65H		1520	US	13 AUG	108.1	90.01	1194	1088	
1965 65J		1521	US	13 AUG	108.1	90.02	1202	1079	
1965 65K		1522	US	13 AUG	108.1	90.00	1190	1093	
1965 65L		1577	US	13 AUG	108.1	90.06	1199	1084	
1965 70A	COSMOS 80	1570	USSR	3 SEP	115.0	56.09	1551	1358	
1965 70B	COSMOS 81	1571	USSR	3 SEP	115.3	56.09	1552	1389	
1965 70C	COSMOS 82	1572	USSR	3 SEP	115.7	56.09	1566	1407	
1965 70D	COSMOS 83	1573	USSR	3 SEP	116.1	56.08	1571	1436	
1965 70E	COSMOS 84	1574	USSR	3 SEP	116.4	56.08	1577	1463	
1965 70F		1575	USSR	3 SEP	114.6	56.16	1517	1357	
1965 72A		1580	US	10 SEP	101.9	98.62	1051	653	
1965 72B		1581	US	10 SEP	101.4	98.84	988	664	



# OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1965 LAUNCHES (CONT'D)									
1965 72C		1582	US	10 SEP	101.2	98.76	1002	625	
1965 72D		1583	US	10 SEP	101.9	98.63	1051	653	
1965 72E		1931	US	10 SEP	103.3	98.63	1186	649	
1965 72F		1932	US	10 SEP	100.7	98.61	936	650	
1965 73A	COSMOS 86	1584	USSR	18 SEP	115.1	56.09	1637	1279	
1965 73B	COSMOS 87	1585	USSR	18 SEP	115.5	56.05	1650	1303	
1965 73C	COSMOS 88	1586	USSR	18 SEP	115.8	56.09	1665	1322	
1965 73D	COSMOS 89	1587	USSR	18 SEP	116.2	56.08	1681	1344	
1965 73E	COSMOS 90	1588	USSR	18 SEP	116.7	56.08	1689	1373	
1965 73F		1589	USSR	18 SEP	116.8	56.11	1695	1380	
1965 73G		1590	USSR	18 SEP	116.5	56.08	1684	1364	
1965 73H		1591	USSR	18 SEP	116.7	56.04	1693	1371	
1965 73J		1617	USSR	18 SEP	117.5	56.13	1764	1375	
1965 73K		1618	USSR	18 SEP	117.7	56.17	1768	1388	
1965 78A		1613	US	5 OCT	125.7	144.28	3451	411	
1965 78B		1616	US	5 OCT	125.6	144.28	3446	412	
1965 80A	2nd MOLNIYA I	1621	USSR	13 OCT	716.6	64.93	39735	560	\$136.200\$400.250
1965 81A	OGO 2	1620	US	14 OCT	104.3	87.37	1510	420	\$400.850
1965 81B		1625	US	14 OCT	104.3	87.38	1503	421	
1965 82A	TITAN 3 C-4	1624	US	15 OCT	100.0	32.31	786	725	
1965 82B-82KC****			US	15 OCT					
1965 84E		2098	USSR	19 OCT	93.9	48.43	515	410	
1965 89A	EXPLORER 29	1726	US	6 NOV	120.3	59.37	2271	1120	\$136.830\$162 \$324\$972
1965 89B		1729	US	6 NOV	120.3	59.39	2270	1120	
1965 91A	VENERA 2	1730	USSR	12 NOV	HELIOCENTRIC ORBIT				
1965 92D		1736	USSR	16 NOV	HELIOCENTRIC ORBIT				
1965 93A	EXPLORER 30	1738	US	19 NOV	100.8	59.71	899	693	136.530
1965 93B		1739	US	19 NOV	100.8	59.72	873	716	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
<b>1965 LAUNCHES (CONT'D)</b>									
1965 93C		2013	US	19 NOV	100.3	59.69	839	707	
1965 93D		2088	US	19 NOV	101.4	59.72	921	729	
1965 95A	COSMOS 91	1777	USSR	26 NOV	105.9	48.41	1854	212	
1965 95B		1779	USSR	26 NOV	105.0	48.48	1767	215	
1965 96A	A-1	1778	FRENCH	26 NOV	108.7	34.25	1799	529	
1965 96B		1805	FRENCH	26 NOV	108.8	34.25	1810	526	
1965 96C		1938	FRENCH	26 NOV	105.6	34.23	1554	490	
1965 96D		1996	FRENCH	26 NOV	108.6	34.25	1792	528	
1965 98A	ALOUETTE 2	1804	CANADA	29 NOV	121.4	79.82	2986	505	\$136.080\$136.590
									136.980
1965 98B	EXPLORER 31	1806	US	29 NOV	121.3	79.81	2974	506	\$136.380
1965 98C		1807	US	29 NOV	121.3	79.82	2978	506	
1965 98D		1808	US	29 NOV	121.3	79.83	2977	505	
1965 98E		1944	US	29 NOV	121.4	79.81	2986	506	
1965 98F		1948	US	29 NOV	121.4	79.87	2981	509	
1965 98G		1951	US	29 NOV	121.3	79.74	2974	503	
1965 98H		2092	US	29 NOV	121.4	79.88	2984	505	
1965 98J		2153	US	29 NOV	121.3	79.78	2979	503	
1965 101A	FR-1	1814	FRENCH	6 DEC	99.9	75.88	762	747	
1965 101B		1815	US	6 DEC	100.0	75.87	768	753	
1965 101C		1934	US	6 DEC	99.9	76.47	774	740	
1965 101D		1935	US	6 DEC	99.5	75.26	782	694	
1965 105A	PIONEER 6	1841	US	16 DEC	HELIOCENTRIC ORBIT				
1965 105B		1842	US	16 DEC	99.9	30.19	1233	268	
1965 106A	COSMOS 100	1843	USSR	17 DEC	97.6	64.99	656	631	
1965 106B		1844	USSR	17 DEC	97.7	65.00	733	568	
1965 107A	COSMOS 101	1846	USSR	21 DEC	91.3	48.77	433	244	
1965 108A	TITAN 3 C-8	1863	US	21 DEC	589.5	26.36	33616	199	
1965 108B	LES 4	1870	US	21 DEC	578.0	26.50	33152	216	
1965 108C	OSCAR IV	1902	US	21 DEC	579.4	26.73	32953	161	
1965 108D	LES 3	1941	US	21 DEC	471.7	26.65	25021	200	

# OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 109A		1864	US	22 DEC	105.0	89.13	1081	914	
1965 109B		1865	US	22 DEC	105.0	89.11	1080	914	
1965 109C		2086	US	22 DEC	103.8	89.19	985	890	
1965 112A	COSMOS 103	1868	USSR	28 DEC	97.0	56.03	633	596	
1965 112B-112Q****			USSR	28 DEC					
1966 LAUNCHES									
1966 04A	COSMOS 106	1949	USSR	25 JAN	92.4	48.37	500	276	
1966 04B		1950	USSR	25 JAN	91.8	48.37	441	273	
1966 05A		1952	US	28 JAN	105.9	89.73	1216	863	
1966 05B		1953	US	28 JAN	105.9	89.71	1213	864	
1966 05C		2140	US	28 JAN	107.9	89.89	1395	866	
1966 05D		2141	US	28 JAN	104.5	89.75	1095	846	
1966 06D		2001	USSR	31 JAN	BARYCENTRIC ORBIT				
1966 08A	ESSA-1	1982	US	3 FEB	100.3	97.90	844	703	\$136.230\$136.920
1966 08B		1983	US	3 FEB	100.5	97.90	867	705	
1966 08C		2085	US	3 FEB	99.2	97.76	755	691	
1966 08D		2118	US	3 FEB	101.4	98.05	955	693	
1966 08E		2154	US	3 FEB	100.3	97.78	817	731	
1966 09A		1997	US	9 FEB	94.8	82.09	511	507	
1966 09B		2003	US	9 FEB	94.5	82.07	500	493	
1966 09C		2004	US	9 FEB	94.5	82.10	500	491	
1966 11A	COSMOS 108	2002	USSR	11 FEB	94.4	48.87	757	216	
1966 11B		2007	USSR	11 FEB	92.6	48.83	579	210	
1966 13A		2016	FRENCH	17 FEB	118.6	34.06	2736	502	
1966 13B	D-1A	2017	FRENCH	17 FEB	118.7	34.03	2744	501	
1966 13C		2018	FRENCH	17 FEB	119.1	34.24	2730	546	
1966 13D		2020	FRENCH	17 FEB	117.8	34.06	2511	636	
1966 13E		2021	FRENCH	17 FEB	118.5	34.05	2682	541	
1966 13F		2023	FRENCH	17 FEB	117.8	34.02	2676	484	
1966 13G		2161	FRENCH	17 FEB	119.5	34.11	2799	517	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCL- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 LAUNCHES (CONT'D)									
1966 16A	ESSA 2	2091	US	28 FEB	113.5	100.98	1421	1354	\$136.770\$137.500
1966 16B		2096	US	28 FEB	113.5	100.98	1420	1356	
1966 19A	GEMINI AGENA TARGET VEHICLE	2104	US	16 MAR	92.6	28.87	407	396	
1966 21B		2108	USSR	17 MAR	90.3	72.09	372	200	136.440\$136.260 \$400.550
1966 24A		2119	US	26 MAR	105.3	89.74	1128	892	
1966 24B		2120	US	26 MAR	105.3	89.74	1128	892	
1966 25A	OV1-4	2121	US	30 MAR	104.1	144.53	1014	886	
1966 25B	OV1-5	2122	US	30 MAR	105.6	144.66	1059	987	
1966 25C		2123	US	30 MAR	105.6	144.67	1059	986	
1966 25D		2124	US	30 MAR	104.1	144.55	1014	884	
1966 26A		2125	US	31 MAR	100.5	98.62	936	632	
1966 26B		2129	US	31 MAR	100.5	98.63	936	632	
1966 27A	LUNA 10	2126	USSR	31 MAR	BARYCENTRIC ORBIT				
1966 27D		2130	USSR	31 MAR	HELIOCENTRIC ORBIT				
1966 27E		2131	USSR	31 MAR	BARYCENTRIC ORBIT				
1966 27F		2132	USSR	31 MAR	BARYCENTRIC ORBIT				
1966 30A	SURVEYOR MODULE	2139	US	8 APR	88.7	30.75	240	158	
1966 31A	OA0 1	2142	US	8 APR	100.9	35.02	803	793	
1966 31B		2144	US	8 APR	100.8	35.04	807	785	
1966 31C		2145	US	8 APR	100.9	35.03	803	792	
1966 33B		2149	USSR	20 APR	88.7	65.70	187	187	
1966 34A	OV3-1	2150	US	22 APR	151.7	82.46	5744	348	
1966 35A	3rd MOLNIYA I	2151	USSR	25 APR	710.5	65.04	39497	499	
1966 35B		2155	USSR	25 APR	91.0	64.86	449	176	
1966 35C		2156	USSR	25 APR	90.8	64.90	430	185	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 LAUNCHES (CONT'D)									
1966 36A	COSMOS 116	2152	USSR	26 APR	92.1	48.36	463	288	
1966 26B		2159	USSR	26 APR	92.0	48.38	449	289	

# DECAYED OBJECTS

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
<u>PLEASE ADD THE FOLLOWING TO THE DECAYED OBJECTS LISTS:</u>					
1964 05A	SATURN 5	744	US	29 JAN	30 APR 66
1965 20CG		1536	USSR	15 MAR	26 APR 66
1965 55D		1744	US	17 JUL	16 APR 66
1965 82EM		1854	US	15 OCT	27 APR 66
1965 107B		1847	USSR	21 DEC	16 APR 66
1966 15B		2071	USSR	22 FEB	29 APR 66
1966 20C		2115	US	16 MAR	18 APR 66
1966 28B		2134	USSR	6 APR	18 APR 66
1966 29A		2136	US	7 APR	26 APR 66
1966 30B		2143	US	8 APR	17 APR 66
1966 32A		2146	US	19 APR	26 APR 66
1966 32B		2148	US	19 APR	22 APR 66
1966 33A	COSMOS 115	2147	USSR	20 APR	28 APR 66
1966 35D		2157	USSR	25 APR	29 APR 66
1966 35E		2160	USSR	25 APR	29 APR 66

FOLLOWING ARE THE INITIAL ELEMENTS OF OBJECTS WHOSE LAUNCH AND ORBIT DECAY OCCURED WITHIN THIS REPORTING PERIOD:

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>PERIOD MINTUES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1966 32A		2146	US	89.6	116.90	375	139	
1966 32B		2148	US	87.6	116.96	312	139	
1966 33A	COSMOS 115	2147	USSR	89.2	65.03	275	184	
1966 35D		2157	USSR	90.5	65.05	140	140	
1966 35E		2160	USSR	89.9	64.90	391	155	

\* APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC

\*\* TWO HUNDRED AND TEN METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.

\*\*\* ONE HUNDRED AND TWENTY TWO OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1965 20A, 1965 20B AND 1965 20C. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.

\*\*\*\* TWO HUNDRED AND FORTY TWO OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 82A. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.

\*\*\*\*\* FOURTEEN OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 112A.

\$ TRANSMITTING ON COMMAND ONLY.

& TRANSMITTING WHEN IN SUNLIGHT ONLY.

# NO CATALOGUE NUMBER ASSIGNED.